Name_____ Date_____

Algebra 2
Unit #2
WS #12

MULTIPLYING AND DIVIDING RADICALS

Simplify

1. $\sqrt{63a^{17}} =$
2. $\sqrt{52a^{9}b^{12}} =$
3. $\sqrt[3]{56a^{11}b^{5}} =$
4. $\sqrt{6a^{7}b^{9}} \cdot \sqrt{8a^{4}b^{5}} =$
5. $\sqrt[3]{16a^{8}b^{5}} \cdot \sqrt[3]{4a^{11}b^{7}} =$
6. $-3\sqrt{6x^{8}y^{3}} \cdot 2\sqrt{8x^{5}y^{7}} =$
7. $4\sqrt[3]{8x^{11}y^{16}} \cdot 2\sqrt[3]{7x^{7}y^{9}} =$
8. $\dfrac{\sqrt{72x^{18}y^{13}}}{\sqrt{4x^{11}y^{9}}} =$
9. $\dfrac{\sqrt[3]{144x^{19}y^{11}}}{\sqrt[3]{6x^{12}y^{7}}} =$
10. $\dfrac{\sqrt{32a^{5}b^{11}}}{\sqrt{18a^{9}b^{8}}} =$
11. $\dfrac{\sqrt[3]{24a^{14}b^{7}}}{\sqrt[3]{30a^{6}b^{15}}} =$
12. $8\left(4\sqrt{6} - 2\sqrt{8}\right) =$
13. $\dfrac{5\sqrt{2} + 3\sqrt{6}}{4\sqrt{3}} =$
14. $\dfrac{6\sqrt{3} - 4\sqrt{6}}{4\sqrt{2}} =$